

A STUDY OF THE OPINIONS OF THE SEVENTH GRADE STUDENTS  
AND TEACHERS TOWARD THE OPEN-SPACE FACILITY  
OF THE URBANDALE JUNIOR HIGH SCHOOL

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A Field Report  
Presented to  
The School of Graduate Studies  
Drake University

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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science in Education

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by  
John Owen Cox  
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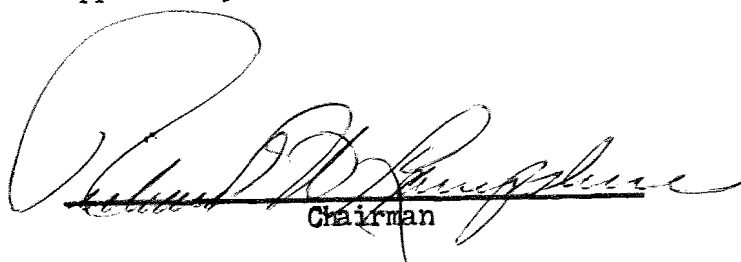
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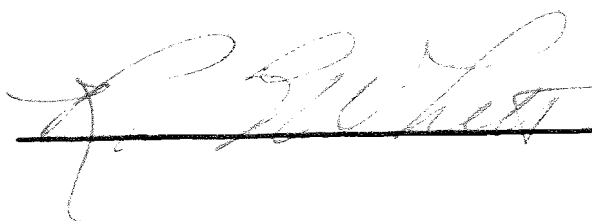
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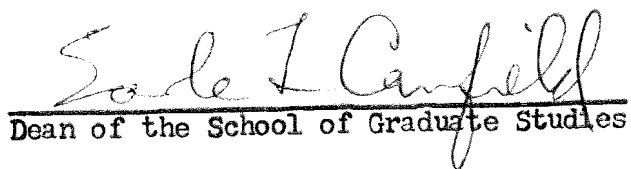
by

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## CHAPTER I

### PROBLEM AND DEFINITIONS OF TERMS

Beginning the fall of 1968, the seventh grade unit of the Urbandale Junior High School moved into a new building adjoining the high school. The inside of this building is an open-space structure permitting flexibility of instruction by providing an opportunity for large group, small group, and independent study. The absence of interior walls and the presence of an acoustically controlled environment, featuring acoustical ceiling and carpeted floors, eliminates the usual building restriction of one teacher working with the typical twenty-five to thirty students in a classroom. Instead, the teacher is able to coordinate activities with other teachers and to place students in groups of one, two, or one hundred students. The flexibility of this open-space allows teachers to work together for planning curriculum content and team teaching.

The school administration's foremost concern is that the opinions of the students and their teachers toward school continually contribute to the learning process. School activities conducted in the environment of an open-space facility may result in a change in student and teacher opinions toward school. The opinions of students and teachers are vital to the success of any educational program. The question asked by the school administration is, "What opinions toward school will students and teachers have as a result of working together within the environment of the open-space facility?"

## I. THE PROBLEM

Statement of the problem. The problem of this study was one of determining whether (1) changes in opinions toward school have occurred in the seventh grade students and their teachers after having worked within the open-space facility of the Urbandale Junior High School; and (2) if changes in their opinions toward school have occurred, what were these changes?

Purpose of the study. The purpose of this study was to discover whether the open-space environment had an effect upon student and teacher opinions, and in the event that opinions changed, to identify the changes in opinion. This study could provide information for the Urbandale school board's and administration's future planning of educational facilities.

Importance of the study. Student and teacher opinions toward the school need to be studied to determine their contribution toward the learning process. Once known, these opinions can give direction to needed changes within the open-space facility. The success or failure of any educational program is ascertained from the participants acceptance of the program. For this reason, this study will seek to expose existing opinions toward school that until the present time have only been assumed.

Limitations of the study. A study of this nature could conceivably be conducted for a period of years to determine whether earlier

data were valid. Due to the limit of time, the actual investigation began in September of 1968 and concluded in April of 1969. This was a sufficient amount of time for the uniqueness of the program to have had its initial effect upon the participants and to enable the obtaining of valid opinions toward the environment within the school.

## II. THE DEFINITIONS

Open-space facility. An open-space facility is a permanent structure existing with few, if any, interior partitions and containing an acoustically controlled environment that permits the grouping of students into any number deemed necessary at the time to further each individual's educational endeavors.

Open-plan facility. An open-plan facility is identical in meaning to the term "open-space facility."

Opinion. Opinion, as described by the American College Dictionary, is "what is thought on any matter or subject."<sup>1</sup>

## III. THE PROCEDURE

The procedure for determining the opinions of students and teachers consisted of the following:

1. A review of current literature was conducted to determine the relationship between school building design and utilization

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<sup>1</sup>C. L. Barnhard (ed.), American College Dictionary (New York: Random House, 1961), p. 849.

as factors affecting opinions toward the environment of an educational facility.

2. A review of current literature was also conducted to determine an opinionnaire that could be used to gather data needed for substantiating the opinions of students and teachers.
3. The selection of questions from the Illinois Inventories of Student and Teacher Opinion was chosen to determine the opinions toward the environment of an open-space facility.<sup>1</sup>
4. The selected questions were administered as a pre-inventory and post-inventory opinionnaire to the students and teachers of the Urbandale seventh grade during the fall and spring, respectively, of the 1968-69 academic year.
5. The opinionnaire responses were tabulated for comparing the pre-inventory to post-inventory.
6. The opinionnaire responses were then compared to determine whether changes in the opinions held by students and teachers had taken place.
7. Conclusions were then drawn based on the changes in the responses of students and teachers on the opinionnaires.
8. A recommendation was then stated based on the findings of this study.

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<sup>1</sup>From, What People Think About Their Schools, by Harold C. Hand, copyright, 1948, by Harcourt, Brace and World, Inc. and reprinted with their permission.



The Illinois Opinion Inventories were published by the World Book Company in 1948. The inventories were formed to be used by school superintendents, boards of education, school administrators and teachers to sample student, teacher, and parent opinion toward school.<sup>1</sup> Data pertaining to the reliability and validity of the inventories are non-existent; however, each inventory is reported to have been developed and carefully pre-tested, used in city-wide polls and modified on the basis of experience in its use.<sup>2</sup> According to Buros, the lack of evidence of reliability and validity is less serious since the meaning of these concepts for an inventory of this type is obscure.<sup>3</sup>

Permission to reproduce the inventories was granted from the publisher.<sup>4</sup> The letter<sup>5</sup> granting the permission to reproduce and use the inventories is found in the Appendix.

The data are presented in Chapter III, representing the pre-inventory opinions.

In Chapter IV, summary, conclusions, and a recommendation are made regarding changes in opinions that had occurred.

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<sup>1</sup>Oscar Krisen Buros (ed.). The Fourth Mental Measurements Yearbook (Highland Park, New Jersey: The Gryphon Press, 1953). Vol. II, pp. 52-53.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Hand, loc. cit.

<sup>5</sup>See Appendix, p. 40.

## CHAPTER II

### REVIEW OF THE LITERATURE

Educational environment. Within this chapter, the investigator will review professional literature concerning the open-space concept. The concept of the open-space or the open-plan of school building design is a rather new one in educational planning. With the emphasis on better ways to meet the needs of the individual student, educators are beginning to realize that the environment within which the learner learns must reflect the philosophy of the school. Celli commented regarding the educational environment in these words:

While we know many facts about the best environment, I am sure we will also discover that there is much we do not know. We have not related the child to the environment. We need to think about the child and his reactions to variations of life, sound, etc.-- the total educational conflicts. And we are after a building that will give us a true spirit of architecture and a joie de vivre.<sup>1</sup>

Celli's statement, "We have not related the child to the environment," points to the major dilemma of American education today.<sup>2</sup> The school building undoubtedly reflects the attitude the public has toward education. At the present time, many of our existing school buildings still reflect the prevailing attitude that children are of

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<sup>1</sup>American Institute of Architects, AIA School Plant Studies, A Report Prepared by the Committee on School Plant Studies, Article BT 1-55 (New York: American Institute of Architects, 1964), p. 1.

<sup>2</sup>Ibid.

no special concern and should not merit a habitation in any way superior to any other.<sup>1</sup>

More than 1,500 of these buildings, built in the "Abe" Lincoln and "Teddy" Roosevelt eras, are still being utilized today.<sup>2</sup> These educational facilities, along with those built in the 1920's and 1930's, reflect a general attitude toward children and their education. Graves reported that:

The attitudes towards children and their education was characterized in general by an attitude of rigidity--children were marched into school to be seated in rows of desks that could not be moved and which took up every inch of space in the dark and often stuffy room. They were drilled in their studies, grade after grade, with little attention paid to each child as an individual human being different from all other human beings. If a child did not measure up, he failed and was held back until he somehow, if ever, came up to the grade. A bright child might skip a grade or two, but that was all the variation possible for him. And the building expressed this attitude.<sup>3</sup>

The typical "old" school building was built as a big box with many little boxes of equal size filling up the space.<sup>4</sup> The architecture of the building then, as well as now, is allowed to sort the children into groups. The public is slowly adopting a new attitude toward education which is one of allowing the individual interests of

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<sup>1</sup>Alvin Tuffler (ed.), Schoolhouse in the City (New York: Frederick A. Praeger, 1968), p. 63.

<sup>2</sup>Ibid., p. 61.

<sup>3</sup>Ibid., p. 62.

<sup>4</sup>American Institute of Architects, Still Sits the Schoolhouse . . . But Less So, A Report Prepared by the Committee on School Plant Studies, Article BT 1-54 (New York: American Institute of Architects, 1963), p. 1.

each child to govern the educational program of the school rather than the building.

Changes in the educational environment. The question may now be asked, "What is the public doing to the outmoded school building to provide an environment that will allow children to better pursue their individual interests?" One attempt is to fit existing buildings to the needs of children by engaging in programs of modernization. In older buildings, the main modernization problem is one of adapting the building so that children can be grouped into arrangements fitting each child's needs at a particular time and place in his development. This facilitates the removal of walls between the "eggcrates" that characterize the inside of most school buildings. The major problem encountered in wall removal projects is that the walls are generally load-bearing walls and are either impossible to remove or too costly to remove.

Most modernization in older buildings is merely simple maintenance or rehabilitation programs resulting in changes of wall color, floor tile, ceiling tile, or lighting fixtures.<sup>1</sup> When the modernization project is finished, the classrooms are still the same size and still dictate or limit the educational program's possibilities.<sup>2</sup> What most modernization programs have done is lock the old school right back into its "eggcrate," restricting new and imaginative educational approaches.<sup>3</sup>

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<sup>1</sup>Tuffler, op. cit., p. 65.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., p. 66.

The estimate is made that we have 250,000 classrooms in use today that are considered inadequate by present-day standards.<sup>1</sup> The priority of education in the public mind is still questionable since the cost of replacing 125,000 of these classrooms and modernizing the remaining 125,000 would amount to the cost of developing a new giant commercial airplane or the cost of a month's expenditure in Viet Nam.<sup>2</sup>

Due to pressure for funds elsewhere, American education must contemplate the meeting of its pressing building needs in the following ways:

1. Continue to focus attention to the school building problem at both the state and national level.
2. Renovate and modernize existing school buildings that are feasible to remodel.
3. Replace old buildings with buildings that have built-in flexibility to enable their adaptation to the future needs of education that are not even known today.

Educational environment for the future. The challenge before American education today is to build flexibility into the school environment that will adequately meet the future needs of education not known today. This challenge may seem impossible to overcome, but it is better to attempt the seemingly impossible than to build schools just to meet the needs of young people at the present. History standing all

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

around us in the form of schools is living proof that schools built for meeting the present needs will soon become archaic and obsolete. The challenge of building the concept of flexibility into the school environment, once realized and accepted by educators, will ultimately bring about a revolution in the designing of schools.

The logical approach to meeting school building needs is to build the buildings so that they can be adapted to the future needs of education as they arise. The concept of the open-space or open-planned school holds great promise of being the type of school building that will adapt to the changing needs of education. The very fact that the only permanent parts of this structure are the exterior walls themselves, means that the space inside the walls can be adapted however and whenever the need arises. Therefore, the main factor that demands contemplation at the onset of building planning is the design of the building itself. The building design must accommodate the anticipated population of the school or be arranged so that building additions can be made easily and readily.

Specifications for the open-space school. What should an open-space school include to meet present as well as future educational needs? The interior of the open-space school must be planned so that the acoustical environment allows for the continuance of group activities without the activities of any one group dictating the type of activity that another must have. The acoustics must be planned so that a person seeking independent study, void of noise, can manage without

interference from a group activity elsewhere in the room.

The floor is the chief reverberant drumhead in a room; and, for this reason, the more sensible step to take is to put the acoustical surface on the floor.<sup>1</sup> Insulative floor covering, commonly referred to as "carpeting," should be one of the chief insulative materials used in a building to control noise. According to Herrington, the use of carpeting can quiet surroundings as well as save 5 per cent of fuel cost and increase the amount of light radiated in a room.<sup>2</sup>

The over-all architecture of the building should be constructed so that "noise" as such is absorbed rather than echoed through the interior of the structure. This planning phase will require the team effort of the educator and architect. Together, they will create an ever-changing, constantly improvable environment for the learning process--what Goodlad called, "a self-renewing school."<sup>3</sup>

Utilization of the open-space school. With the building and its acoustics having been considered, the next important area of concern is the utilization of the open space. The environment and flexibility within the open space are the key considerations in planning how the

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<sup>1</sup>American Institute of Architects, op. cit., p. 2.

<sup>2</sup>Ibid.

<sup>3</sup>Ronald Gores and Judith Murphy, Educational Change and Architectural Consequences, A Report of the Educational Facilities Laboratories, Inc., (New York: Educational Facilities Laboratories, Inc., 1968), p. 16.

space should be utilized.<sup>1</sup> As flexibility is being built into the open space, the environment within which the learner functions must respect him and his need for a sense of amenity if his learning is to be the most efficient.<sup>2</sup>

The open-space school, reflecting an environment of amenity that permits and encourages the learner to fulfill his basic educational needs, should pattern its educational plan around the following objectives:

1. A vertical organization featuring non-grading and multi-grading that provides for differentiated rates and means of progression toward achievement of educational goals.
2. A horizontal organization featuring the cooperative effort of teachers that provides flexibility in assigning pupils to instructional groups ranging in size from one pupil to as many as one hundred or more.
3. A program that allows each student to experience continuity and relatedness in his learning.
4. A program that allows each student to have a close counseling relationship between himself and the teachers who know him.<sup>3</sup>
5. A program that allows the professional team members of a teaching team to decide in a general way how children are to be grouped (ability, interest) where they will meet, who will teach what group and how the general schedule will work.<sup>4</sup>

An open-space facility, functioning around the objectives outlined by the National Education Association's project on instruction, should have certain physical facilities incorporated into the open

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<sup>1</sup>Richard I. Miller, Education in a Changing Society (Washington, D. C.: National Education Association, 1963), p. 143.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid., pp. 141-142.

<sup>4</sup>Evans Clinchy (ed.), Schools for Team Teaching (New York: Educational Facilities Laboratories, 1961), p. 21.



space. These physical facilities should permit and encourage the following:

1. Varying size of groups ranging from small seminars to multiple class.
2. Individual study with visual and/or acoustic privacy.
3. Access to a variety of instructional media.
4. Multiple use of the space within the school.<sup>1</sup>

The physical facilities within the open space, dependent upon school population, should include one or more well-planned instructional materials and resource centers (IMC) incorporating both the effect of a library and an audio-visual center. These centers should be staffed by professionals prepared in curriculum and instruction, library service, and in audio-visual services.<sup>2</sup> As much as 50 per cent of the open space should be "library-like" in its appearance with this space being used for research and "guided independent study."<sup>3</sup>

The remainder of the open space should be designed to accommodate groups from one hundred students downward to one or two studying by themselves. Areas of this building should be provided with space where teachers can meet and work privately with the aid of a workroom for the preparation of special instructional materials.<sup>4</sup>

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<sup>1</sup>Miller, op. cit., p. 142.

<sup>2</sup>Ibid.

<sup>3</sup>Clinchy, op. cit., p. 98.

<sup>4</sup>Donald J. Leu (ed.), Planning Educational Facilities (New York: Center for Applied Research, 1965), p. 6.

Opinionnaire on the open-space school. The literature previously discussed on school building design and utilization provided the criteria for the questions that were selected from the Illinois Inventory of Student and Teacher Opinion. The questions selected reflect opinions toward the physical facilities, the instruction, and the social environment, all of which comprise the environment within the open-space facility.

The questions selected for student response from the Illinois Inventory of Pupil Opinion are as follows:

. . . .

6. In general, are you satisfied or dissatisfied with your school?  
.....
8. In general, are you satisfied or dissatisfied with the way you are treated by teachers and school officials?  
.....
13. In general, is the discipline in your school too strict or not strict enough?  
.....
15. In general, how often do the pupils in your school treat one another fairly and kindly?  
.....
23. In general, do you have to do too much or too little work in order to "keep up" in your studies?
24. How much of what you are studying do you think will be useful to you in everyday living?  
.....
29. Does your school have as much equipment (library books, moving-picture equipment, gymnasium and playground equipment, laboratory equipment, etc.) as it needs?
30. Do you think your school is overcrowded? . . .<sup>1</sup>

The questions selected from the Illinois Inventory of Teacher Opinion for teacher response are as follows:

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<sup>1</sup>Hand. op. cit., pp. 181-194.

4. In general, are you satisfied or dissatisfied with the school in which you teach?  
 .....  
 6. In general, are you satisfied or dissatisfied with the way pupils are treated by the teachers and school officials of your school?  
 .....  
 11. In general, is the discipline in your school too strict or not strict enough?  
 .....  
 13. In general, how often do the pupils in your school treat one another fairly and kindly?  
 .....  
 21. In general, do the pupils in your school have to do too much or too little work in order to "keep up" in their studies?  
 22. How much of what the pupils in your school are studying do you think will be useful to them in everyday life?  
 .....  
 27. Does your school have as much equipment and as many facilities as it needs?  
 28. Do you think that the school in which you teach is overcrowded? . . . .<sup>1</sup>

The data compiled through these opinionnaires were tabulated in tables for study in Chapter III.

Open-space schools in practice. The concept of the open-space school is rather new, but evidence from various parts of the nation has shown the concept gaining support steadily. This fact is evidenced in the Urbandale School District where, besides the open-space facility of the seventh grade, the concept of open space is being utilized in the elementary schools.

The Rolling Green Elementary School, completed in the fall of 1968, is the newest building constructed on the open-space plan. The

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<sup>1</sup>Hand, op. cit., pp. 195-217.

five other elementary schools, having been constructed at earlier dates, include open-space areas equivalent in size to two or three "standard" classrooms. These open-space areas may be divided, in most cases, by the use of accordian doors built between the rooms. To achieve open space in some of the buildings, it was necessary to remodel the building by removing non-load bearing walls.

The Urbandale School District supports the open-space concept. The District is planning to utilize this concept in new buildings and additions that are to be made in the elementary and junior high school.

The advantages of flexible open space continue to unfold within Urbandale's school program as it develops. Children and teachers alike are finding the atmosphere of living and learning to be very rewarding.

The advantages of open-space schools, as experienced by the Urbandale School Board and professional staff, are best characterized by the following statement made by Don Pack, Principal of the Rolling Green and Olmsted Elementary Schools:

1. True team teaching is made possible and enhanced by the ability to regroup students as their needs are determined.
2. Students are able to have meaningful social relations with other students through the common sharing of experiences and learning activities.
3. Audio-visual equipment and instructional materials are more efficiently utilized by teachers and students.
4. The school principal is more actively involved in the learning process through the ease of participation.
5. Coordination of schedules for regular classes and special activities is much easier.
6. Staffing is more flexible and the expertise of each teacher is better utilized.
7. Extracurricular activities are provided before, during, and after school because of easier supervision.

8. Acoustical treatment provides the amenity needed within the environment of the open space.
9. Teachers gain deeper understanding of students through informal observation.
10. Students develop more interests from watching other students.<sup>1</sup>

In addition to these advantages, Harlan Else, Principal of the Karen Acres and Valerius Elementary Schools, states an additional advantage to the open-space school in this regard, "In the open-space areas there is more freedom, not only of movement, but in freedom of thought and creativity."<sup>2</sup>

The main disadvantage experienced has been in adapting teachers to the open-space concept. As stated by Harlan Else:

The main disadvantage of the open space is not in terms of disadvantage to the student, but in the relation to the teacher. Certain teachers feel more comfortable in self-contained, walled-in classrooms. They feel they have lost their control over students in the open-space area. The main disadvantage, therefore, is related to teachers and how they feel toward this concept.<sup>3</sup>

Summary. Albert Einstein once asked the question, "Why are schools so operated that by the time a child has left grammar school, he no longer has a thirst for knowledge?"<sup>4</sup> The proposed remedy to this situation cited by Einstein may be lessened or eliminated by employment of the open-space concept in our schools. If we are to keep students

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<sup>1</sup>Statement by Don Pack, personal interview.

<sup>2</sup>Statement by Harlan Else, personal interview.

<sup>3</sup>Ibid.

<sup>4</sup>American Institute of Architects, loc. cit., p. 2.

"thirsty," we must turn them loose to learn at their own pace.<sup>1</sup> The main problem in education has been the unwillingness on the part of educators to get out of the learner's way and to let him learn.<sup>2</sup> The open-space "school without walls" is a concept that enjoys thoughtful consideration.<sup>3</sup> This concept should provide the type of environment that enables the educator to move from a position in front of the learner to a position more at the learner's side. The educator can then serve as a guide in helping the student achieve his goals.

The research method and presentation of the data are presented in the following chapter.

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 3.

<sup>3</sup>Tuffler, op. cit., p. 70.

## CHAPTER III

### RESEARCH METHOD AND PRESENTATION OF DATA

The problem of this study was to determine whether changes in student and teacher opinions toward school have occurred while functioning within the open-space facility of the school; and, if changes in their opinions have occurred, what were these changes?

#### I. THE RESEARCH METHOD

Prior to this phase of the study, a review of current literature was conducted regarding school building design and utilization as factors affecting the educational environment. Once the relationship of school building design and utilization were substantiated through current literature as factors affecting the educational environment, questions relating to this relationship were selected for analysis from the Illinois Inventory of Pupil and Teacher Opinion.<sup>1</sup>

The seventh grade students and teachers of the Urbandale Junior High School responded to these questions on a pre-inventory opinionnaire and post-inventory opinionnaire administered in the fall and spring, respectively. In September of 1968, when the pre-inventory opinionnaire was administered, 224 seventh grade students and nine seventh grade teachers responded to the opinionnaire. In April of 1969, when the post-inventory opinionnaire was administered, 243 seventh

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<sup>1</sup>Hand, loc. cit.

grade students and nine seventh grade teachers responded to the opinionnaire. The student enrollment in April reflected new students that had moved into the school district since September. These students increased the school enrollment and also replaced students who had moved out of the school district since September. To minimize the effect of these two variables, a random sample was taken to select 200 student opinionnaires to be used for the study, of which 100 were from girls and 100 from boys.<sup>1</sup>

To begin the random sampling, the opinionnaires were first divided according to sex. Five coins were then flipped to determine the starting position for the random selection of opinionnaires. The number of coins flipped and landing with heads-up indicated the starting position within each group of opinionnaires. The heads appeared twice so the starting position in each group of opinionnaires was the second opinionnaire. To determine which opinionnaires were to be selected from each group, the five coins were flipped again this time producing three heads. Every third opinionnaire was then randomly selected until 100 had been selected from the girl and boy opinionnaires, respectively. Because the same nine teachers were polled in the pre-inventory and post-inventory, all the teacher opinionnaires were used.

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<sup>1</sup>Urbandale, being a mobile suburban community, has many students enrolling during the school year and transferring out of the school district.



## II. THE PRESENTATION OF DATA

The data are presented to show the students' and teachers' responses to the questions on the pre-inventory and post-inventory opinionnaires. The responses reflect the opinions held by students and teachers toward the physical facilities, instruction, and the social environment within the open-space facility.

Opinion regarding overcrowded facilities. As to whether the open-space facility of the school was "not overcrowded," the pre-inventory and post-inventory opinionnaires affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	58 per cent	53 per cent
Girls	76 per cent	60 per cent
Teachers	44 per cent	11 per cent

In regard to the respondents' feeling the open-space facility of the school was "somewhat overcrowded," the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	36 per cent	35 per cent
Girls	22 per cent	39 per cent
Teachers	56 per cent	67 per cent

Regarding the open-space facility of the school having a "seriously overcrowded" condition, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	5 per cent	9 per cent
Girls	1 per cent	0 per cent
Teachers	0 per cent	22 per cent

Respondents with no opinion concerning the open-space facility being overcrowded were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	1 per cent	3 per cent
Girls	1 per cent	1 per cent
Teachers	0 per cent	0 per cent

Opinion regarding equipment and facilities. As to whether respondents felt the school had "everything" in the way of instructional equipment and facilities necessary, the pre-inventory and post-inventory affirmative replies were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	12 per cent	13 per cent
Girls	10 per cent	6 per cent
Teachers	0 per cent	0 per cent

Regarding the school's having "most" of the instructional equipment and facilities necessary, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	60 per cent	47 per cent
Girls	66 per cent	56 per cent
Teachers	56 per cent	33 per cent

Considering how the respondents felt about whether the school had "very little" of the necessary equipment and facilities, the

affirmative replies were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	26 per cent	37 per cent
Girls	24 per cent	36 per cent
Teachers	44 per cent	67 per cent

Respondents with no opinion regarding the availability of instructional equipment and facilities were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	1 per cent	3 per cent
Girls	0 per cent	2 per cent
Teachers	0 per cent	0 per cent

Opinion regarding schoolwork. As to whether respondents felt the schoolwork offered "about all useful" experiences, the pre-inventory and post-inventory opinionnaires affirmative replies were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	51 per cent	43 per cent
Girls	51 per cent	51 per cent
Teachers	44 per cent	11 per cent

Concerning the schoolwork's offering "somewhat less than useful" experiences for the students, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	40 per cent	33 per cent
Girls	40 per cent	38 per cent
Teachers	44 per cent	78 per cent

In regard to the schoolwork's providing "considerably less than useful" experiences for the students, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	8 per cent	20 per cent
Girls	6 per cent	9 per cent
Teachers	0 per cent	0 per cent

Respondents with no opinion towards the schoolwork's offering useful experiences for students were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	1 per cent	4 per cent
Girls	3 per cent	2 per cent
Teachers	11 per cent	11 per cent

Opinion regarding required work. As to whether the students were required to "do little work" to "keep up" in their studies, the pre-inventory and post-inventory opinionnaires affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	9 per cent	13 per cent
Girls	6 per cent	6 per cent
Teachers	11 per cent	11 per cent

Regarding the school requiring "about the right" amount of work for students to "keep up" in their studies, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	68 per cent	56 per cent
Girls	79 per cent	77 per cent
Teachers	89 per cent	78 per cent

In regard to the respondents' feeling the school required "too much work" from students to "keep up" in their studies, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	23 per cent	27 per cent
Girls	15 per cent	17 per cent
Teachers	0 per cent	11 per cent

Opinion regarding discipline. As to whether respondents felt the discipline was "too strict" within the open-space facility, the pre-inventory and post-inventory opinionnaires affirmative replies were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	11 per cent	34 per cent
Girls	9 per cent	29 per cent
Teachers	11 per cent	0 per cent

With respect to the discipline's being "about right" within the open-space facility, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	4 per cent	5 per cent
Girls	0 per cent	9 per cent
Teachers	11 per cent	44 per cent

All respondents to the opinionnaires expressed an opinion regarding the discipline within the open-space facility.

Opinion regarding pupil treatment. As to whether respondents felt "satisfied" concerning treatment given students by school personnel, the pre-inventory and post-inventory responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	78 per cent	58 per cent
Girls	88 per cent	71 per cent
Teachers	100 per cent	100 per cent

Regarding respondents feeling "undecided" concerning the treatment given students by school personnel, the affirmative replies were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	17 per cent	24 per cent
Girls	12 per cent	18 per cent
Teachers	0 per cent	0 per cent

Respondents feeling dissatisfaction in the treatment given students by school personnel were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	5 per cent	17 per cent
Girls	0 per cent	11 per cent
Teachers	0 per cent	0 per cent

With the exception of 1 per cent of the boys responding with no opinion on the post-inventory opinionnaire, all respondents expressed an opinion regarding the treatment given students by school personnel.

Opinion regarding student-student relationships. As to whether students "usually" treated each other fairly and kindly within the school, the pre-inventory and post-inventory affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	57 per cent	38 per cent
Girls	69 per cent	42 per cent
Teachers	67 per cent	78 per cent

With the thought that students treated each other fairly and kindly "about half" the time within the school, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	29 per cent	26 per cent
Girls	25 per cent	35 per cent
Teachers	33 per cent	11 per cent

Respondents with the opinion that students "seldom" treated each other fairly and kindly within the school, their affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	14 per cent	35 per cent
Girls	6 per cent	23 per cent
Teachers	0 per cent	11 per cent

With the exception of 1 per cent of the boys with no opinion on the post-inventory opinionnaire, all respondents expressed an opinion regarding the frequency with which students treated each other fairly and kindly.

Opinion regarding school. As to whether the respondents felt "satisfied" with their school, the pre-inventory and post-inventory affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	78 per cent	66 per cent
Girls	78 per cent	59 per cent
Teachers	67 per cent	89 per cent

Regarding respondents feeling "undecided" about their school, the affirmative responses were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	20 per cent	29 per cent
Girls	20 per cent	31 per cent
Teachers	33 per cent	11 per cent

Respondents feeling dissatisfaction with their school were:

	<u>Pre-inventory</u>	<u>Post-inventory</u>
Boys	2 per cent	5 per cent
Girls	2 per cent	10 per cent
Teachers	0 per cent	0 per cent

All respondents to the opinionnaires expressed an opinion regarding their satisfaction with school.

In Chapter IV, a summary and conclusion are made regarding changes in opinion as revealed by this study.



## CHAPTER IV

### SUMMARY, CONCLUSIONS, AND RECOMMENDATION

The problem to be solved by this study was one of determining whether (1) changes in opinions toward school have occurred in the seventh grade students and their teachers after having worked within the open-space facility during the 1968-1969 academic year; and (2) if changes in their opinions toward school have occurred, what were these changes?

Once the problem was defined for study, a review of the literature pertaining to school building design and utilization as factors affecting the educational environment was completed and presented in Chapter II. Questions were then selected from the Illinois Inventory of Pupil and Teacher Opinion and administered as pre-inventory and post-inventory opinionnaires to the seventh grade students and teachers of the Urbandale Junior High School in the fall and spring of the 1968-1969 academic school year.

The responses of the students and teachers to each inventory were compared to show the changes in opinions and what these changes were. An analysis of the responses to the pre-inventory opinionnaire and post-inventory opinionnaire were tabulated and presented in Chapter III.

The final analysis of the study is presented in the following three steps: the summary, conclusions, and a recommendation for further investigation.

## I. SUMMARY

The adequacy of facility space was an important aspect of this study. Most of the students, even on the post-inventory, did not feel the open-space facility was overcrowded, but more students on the post-inventory felt the open-space facility was overcrowded than on the pre-inventory.

Teachers on the pre-inventory reported no serious overcrowding whereas on the post-inventory, about seven-tenths and two-tenths of the teachers, respectively, felt the school was "somewhat" overcrowded or "seriously" overcrowded.

Of major importance in the instruction of youth is the availability of instructional equipment and facilities. The pre-inventory and post-inventory reveal that most of the students felt the school had "most of" the instructional equipment and facilities necessary, but more students on the post-inventory felt the school had "very little" of the necessary equipment and facilities than on the pre-inventory.

About six-tenths of the teachers on the pre-inventory reported the school having "most of" the equipment and facilities necessary for instruction, but by the time the post-inventory was administered, about seven-tenths of the teachers felt the school had "very little" of the equipment and facilities necessary for instruction.

How well the curriculum of a school provides useful experiences for the students is a measure of how well a school fulfills its

function. Slightly more than one-half of the students on the pre-inventory felt the schoolwork offered "about all" useful experiences, but slightly less than half of the students felt this way on the post-inventory. The boys increased on the post-inventory from one-tenth to two-tenths in those feeling that the schoolwork provided "considerably less" than useful experiences.

Over four-tenths of the teachers on the pre-inventory felt the schoolwork offered "about all" useful experiences, but on the post-inventory, only about one-tenth felt this way. This change of opinion by teachers was further reflected as the number feeling schoolwork offered "somewhat less" than useful experiences almost doubled between pre- and post-testing.

The success of the curriculum of a school depends on the contribution made by the teachers in terms of planning the activities that the students then cooperate to complete. Most students, even on the post-inventory, felt the school required "about the right" amount of work for students to "keep up" in their studies, but more students on the post-inventory, especially boys, felt the school required "too much work" from students than on the pre-inventory.

A high percentage of teachers, even on the post-inventory, felt the school required "about the right" amount of work for students "to keep up" in their studies, but more teachers on the post-inventory felt the school required "too much work" from students than on the pre-inventory.

Discipline procedures are important to both teachers and students to further the learning process. Too much restriction can inhibit learning just as a chaotic situation can. Therefore, there have to be proper discipline procedures in any learning situation where attitudes and values are being developed.

Most students, even on the post-inventory, felt the discipline procedures were "about right" within the open-space facility, but more students on the post-inventory, especially the boys, felt the discipline was "too strict" than on the pre-inventory.

Most of the teachers on the pre-inventory felt the discipline was "about right." Over four-tenths of the teachers felt discipline was "not strict enough" by the time the post-inventory was administered.

Students and teachers were asked how they felt school personnel treated students. Most students, even on the post-inventory, felt "satisfied" concerning the treatment given them by school personnel, but more students on the post-inventory were "undecided" or "dissatisfied" in the treatment they received from school personnel than on the pre-inventory.

Teachers on the pre-inventory and post-inventory reported complete "satisfaction" concerning the treatment given students by school personnel.

An important part of this study was to determine whether students frequently treated each other fairly and kindly. Most students, as revealed on the post-inventory, felt that students frequently treated

each other fairly and kindly from "seldom" to "about half" the time.

Most teachers, even on the post-inventory, felt students frequently treated each other fairly and kindly. By the time the post-inventory was administered, about two-tenths of the teachers were equally divided between feeling that students treated each other fairly and kindly "about half" the time to "seldom" at all.

Since the main objective of this study was to determine the degree of satisfaction and change in opinion as evidenced by student and teacher, the last question asked of students and teachers regarded their over-all satisfaction toward school.

Most students, even on the post-inventory, felt "satisfied" with their school, but more students on the post-inventory felt "undecided" or "dissatisfied" than on the pre-inventory.

About seven-tenths of the teachers on the pre-inventory reported "satisfaction" with school; but, by the time the post-inventory was administered, about nine-tenths of the teachers felt "satisfied" with the school whereas the other one-tenth were "undecided" in this opinion. This raises the question concerning the previously reported opinions of teachers regarding overcrowding, adequacy of equipment and facilities, useful experiences received by students from schoolwork, and discipline.

## II. CONCLUSIONS

This study determined that changes in opinions toward school did occur in the seventh grade students and teachers of the Urbandale Junior

High School; but, in the main, both students and teachers expressed satisfaction with the school.

The changes in student opinion were that more students felt:

1. The open-space facility was overcrowded.
2. The school was lacking necessary instructional equipment and facilities.
3. The school required "too much work" for students, especially for the boys, to satisfactorily "keep up" in their studies.
4. Schoolwork offered "less" than useful experiences for all students.
5. Discipline had a tendency to be "too strict," especially as viewed by the boys.
6. "Undecided" or "dissatisfied" with the treatment received from school personnel.
7. Students did not treat each other fairly and kindly.
8. "Undecided" or "dissatisfied" with school.

The changes in teacher opinion were that more teachers felt:

1. The open-space facility was overcrowded.
2. The school was lacking necessary instructional equipment and facilities.
3. The school required "too much work" for students to satisfactorily "keep up" in their studies.
4. Schoolwork offered definitely "less" than useful experiences for students.

5. Discipline was "not strict" enough.
6. Students did not treat each other fairly and kindly.
7. Satisfied with school.

### III. RECOMMENDATION

The following recommendation is offered for further study:

1. A survey should be conducted with teachers to develop an evaluation for an open-space facility to enumerate specifically the criteria for determining discipline procedures, equipment, utilization of space, and curriculum objectives.

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## APPENDIX

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August 9, 1968

Mr. John Cox  
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